Computer and Internet Use on PEI Farms

Survey Results

March 2000

Acknowledgements

The Prince Edward Island Agricultural Human Resource Council gratefully acknowledges the full cooperation of industry farm owners who were contacted for their input and time when queried on the use of computers on Island farms and their suggested computer training requirements.

Computer and Internet Use on P.E.I. Farms will serve as a training needs assessment tool for the Agricultural Human Resource Council and for the P.E.I. Department of Agriculture and Forestry.

Our researcher, Atlantic AgriTech Inc., displayed a sincere commitment to the project's objectives. The quality of the research will provide the partners involved with reliable data and a quality end-product.

The partners include:

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PEI Agricultural Human Resource Council
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Contents

Executive Summary 5

Background and Methodology 6

Demographic Information 7

Surveys of Farms Without Computers 10

Surveys of Farms With Computers But Not Used for Farm Use 13

Surveys of Farms Using Computers 16

Appendix 1. Forms Used for Conducting the Survey 20

Appendix 2. Additional Information Provided by Respondents 25

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Executive Summary

A survey of computer and internet use on PEI farms was conducted during March 2000, in response to a need for information on the level of adoption of these technologies by Island farm managers. Four hundred responses were collected from a broad representation across commodities, farm size and agricultural district, representing approximately 20.5% of the 1950 farmers listed on the Department of Agriculture and Forestry's Client List.

It was determined that over 61% of Island farms surveyed owned at least one computer on their operation. An additional 8.5% indicated that they were planning to purchase a computer for their farm business within the next year. Over 41% of respondents currently use computers for farm use, while 6.8% of those who have a computer but are not using it for the farm, plan to do so within the next year. Computer use is much higher than in the 1995 survey results which indicated that 33% of farmers had a computer with an additional 11% planning to purchase within a year, and 27% of those who already owned a computer used it for farm use with an additional 3% planning to use it within a year of that survey.

A major concern expressed in this survey by those who do not own a computer was training needs, although the main reason for not owning a computer appeared to be related to the size of the operation (very small operations did not see the need for computers) and age of the principal farm operator (older managers did not feel comfortable with the technology or did not see the usefulness).

A similar concern appeared in surveys of those who owned a computer but did not use it for farm use - primarily lack of training. Respondents felt that if more training was available it would help influence their decision to use their computer for farm use. A second factor was lack of time to learn and use the computer. As well, many of those not using the computer felt they were 'too old' or felt no need to use the computer.

The main uses of the farm computer include accounting, email, word processing and getting information from the internet. Almost 90% of on-farm computer users are using Windows 95 or Windows 98 operating systems, indicating that the computers used are relatively new. Also, almost 80% of computer users are using the internet for reasons such as email and to obtain general and agriculture related information.

Overall, larger farm operations and younger operators tend to be the most common computer owners and users. There did not appear to be a difference in computer ownership or computer use based upon commodity produced or agricultural district where the farm is located.

Background and Methodology

With the advances of technology over the past few years computer systems and internet hookups have become much more reliable and more affordable than ever before.

The most recent information available on computer and internet use on PEI farms is from a survey conducted by the Department of Agriculture, Fisheries and Forestry in 1995[1]. The PEI Department of Agriculture and Forestry, in cooperation with the PEI Agricultural Human Resource Development Council, have identified a desire to better identify the current level of adoption of computers and internet use on PEI farms. The main goals of this survey were to determine the number of PEI farms that use computers and the internet, as well as to identify primary barriers to computer and internet use.

During March 2000, 400 farm clients from across PEI were surveyed by telephone. Surveyors primarily spoke to a person knowledgeable about computer use on the farm, although not necessarily the farm manager. Based on the relative number of PEIDAF clients in each district, a representative sample of PEI farm operations was taken, ensuring proper proportions from each district. Based on the sample size of 400 from a total client list of approximately 1950 farm operations, the following number of surveys were collected in each district: West Prince - 72, Summerside - 88, Charlottetown - 126, Montague - 74, and Souris - 40. A review of the demographic information obtained from respondents indicate broad representation across commodity, farm size, and age of the principal operator.

Respondents were asked questions to one of three parts of the survey based on their response to two initial questions which determined whether or not they owned a computer, and if they did, then whether they used the computer for farm use. Thus results are presented in three sections: 1) those who do not own a computer, 2) those who own a computer, but do not use it for farm use, and 3) those who own at least one computer and use it for farm use.

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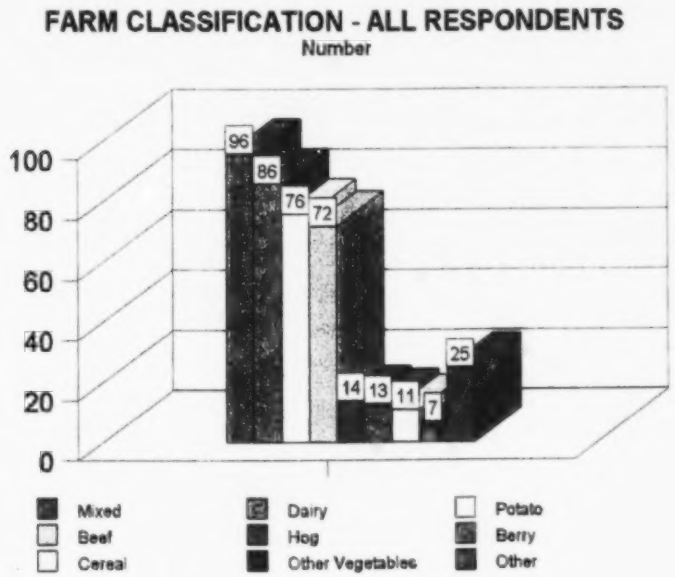
[1] PEI Department of Agriculture, Fisheries and Forestry, Planning and Development Division. *Computer Use and Information Services Usage by Farm Clients*. April 1995

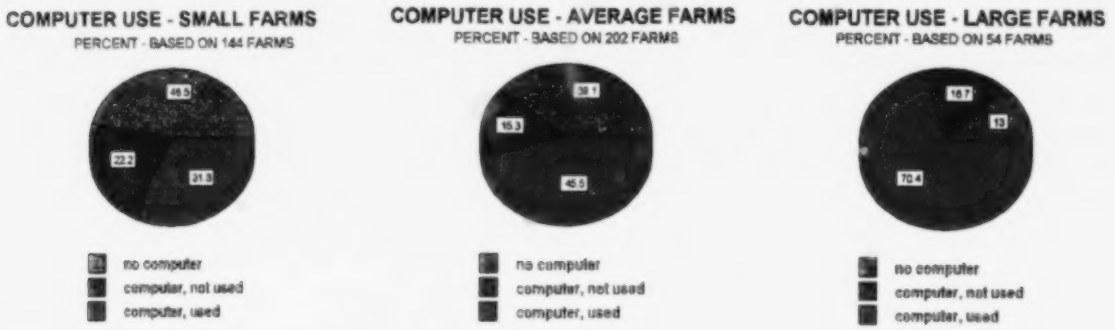
Demographic Profile

Overall, 400 surveys were completed on Island farm operations. Each respondent was asked how they would classify their farm according to the primary commodity produced. Approximately 24% (96) of the respondents stated that their operation was a mixed one. Dairy farms represented the second largest group surveyed with almost 22% (86) of the total number. Potato and beef were the next largest groups represented with 19% (76) and 18% (72), respectively. Other operations surveyed included hog at 3.5% (14), berry crops at 3.3% (13), cereals at 2.8% (11) and other vegetable crops at 1.8% (7). Other commodities which included horses, sheep, ostridges, egg and poultry, bees, fruit, herb, cash crops, aquaculture, forestry contracting, and grain cleaning made up the remaining 6.3% (25) operations.



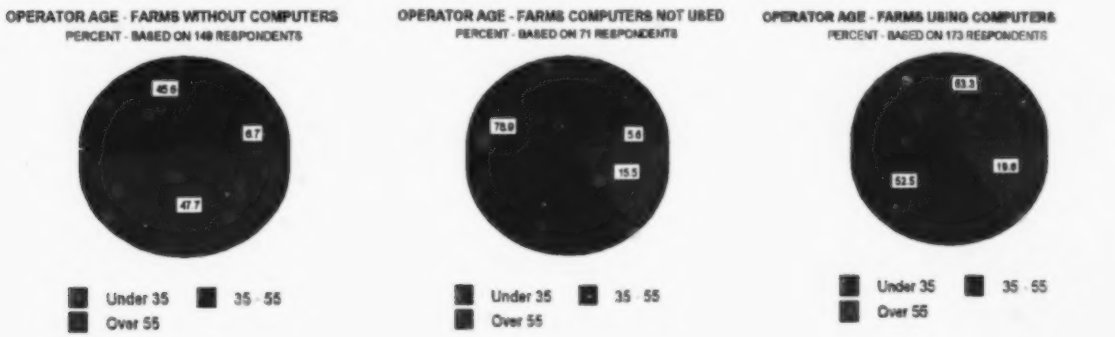
Respondents were asked to classify their farm size as small, average or large, based upon comparison to other farms in their industry. Of the 400 respondents, 36% (144) stated that the size of their operation was "below average", while 50.5% (202) were "average" size. The remaining 13.5% (54) were "above average" size.

Larger operations tended to have and use computers 70.4% of the time as compared to 45 5% of the time on average sized farms and only 31.3% of the time on below average sized farms.



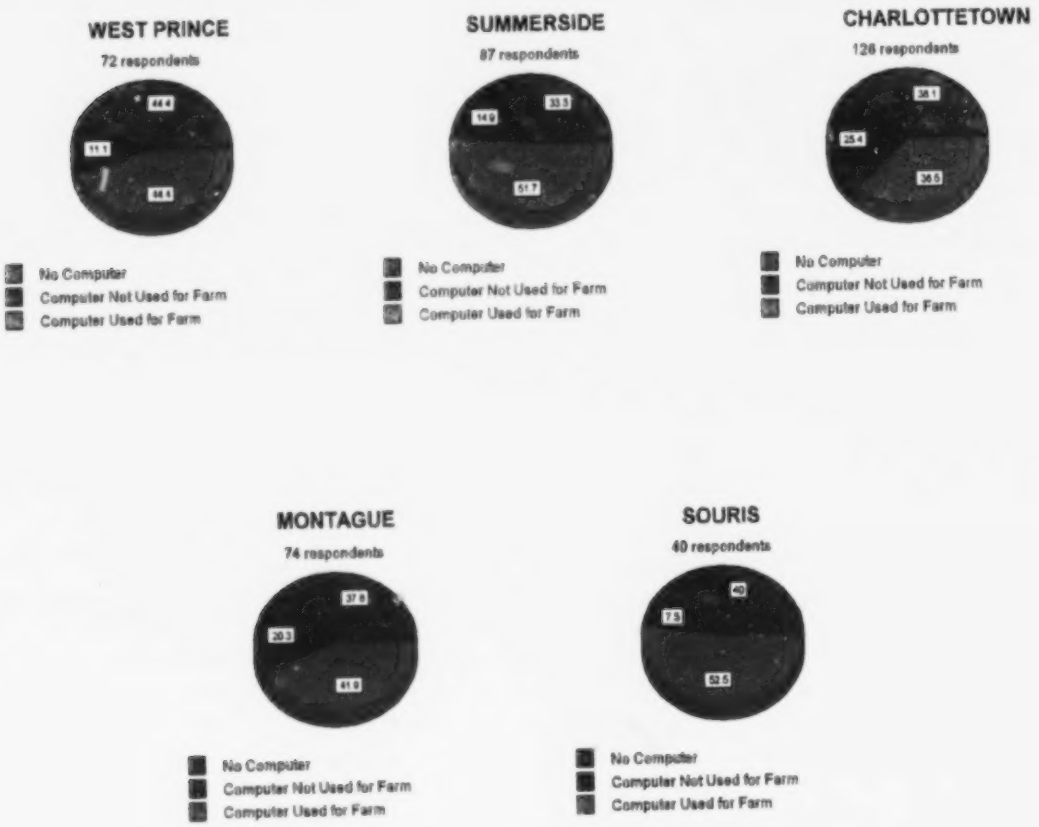
Respondents were also asked to classify the age of the principal operator (manager) of the farm, based on broad age categories provided by the surveyors. Overall, 30 respondents (7.5%) stated that the principal operator was under 35 years of age, 261 (65.3%) stated that the operator was 35 to 55 years of age, and 102 (25 5%) were over 55 years old. Seven respondents did not provide an answer to this question. Seven (1.7%) did not respond to the question.

Based on the 149 farms without computers, 47.7% of those farms were operated by someone over the age of 55. Forty-five point six were operated by someone aged 35-55 years old. While only 6.7% of the farms without computers were operated by someone under 35 years of age. Of the 71 farms where the computer was not used for the farm, 78.9% of them were operated by someone who was 35-55 years old. Just over 15% were operated by someone over 55 years old, and 5.6% were operated by someone under 35 years of age. Based on the 173 farms where the computer was used for the operation, 79 2% were operated by someone between the ages of 35-55.



Computer Use By District

The number of farms with computers was fairly consistent across the districts, with the proportion of farm operations with computers ranging from a low of 36.5% in Charlottetown district to a high of 52.5% in Souris district.



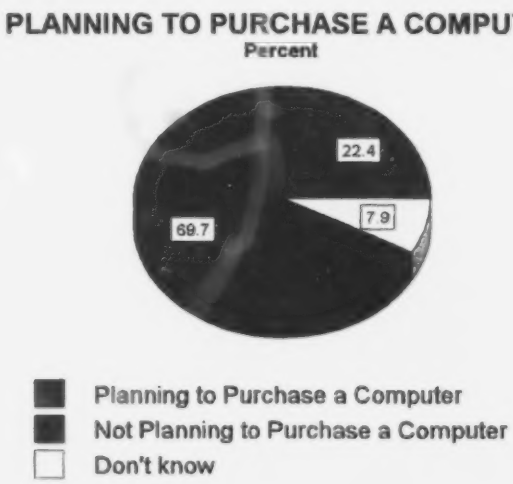
Surveys of Farms Without Computers

Survey Question 1 and Survey Question 2 dealt with coding and determining which portion of the survey to ask a participant. Following is the summary of responses to the actual survey questions.

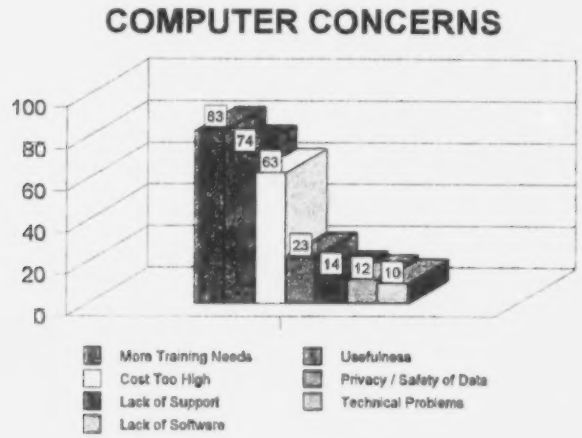
The following is the summary of information for the 153 respondents who indicated that they do not have a computer:

Survey Question 3.1 - Are you considering purchasing a computer for your farm business in the next year?

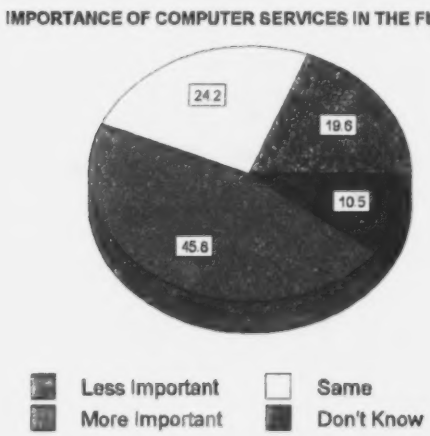
Respondents who did not have a computer were asked the above question in order to determine their interest in dealing with computers in the future. Over 22% of those surveyed indicated that they were planning to get a computer, while almost 70% did not plan to get one.

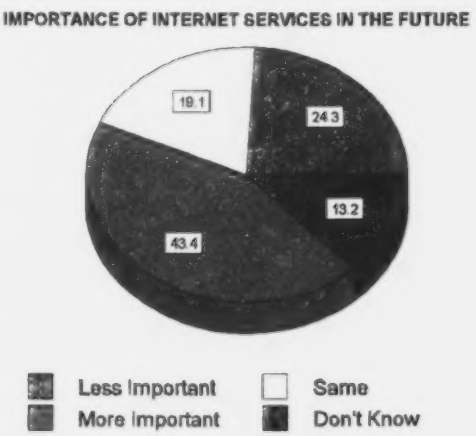


Survey Question 3.2 - I will read a list of concerns that people without computers have - please answer whether you are also concerned with...
The greatest concerns people had were training needs, usefulness and cost. Other reasons were also given and can be seen on the following page.



Survey Question 3.3 - Compared to today, what level of importance do you see a computer playing in the future of your business? Compared to today, what level of importance do you see Internet services playing in the future of your business?
Of the respondents asked these questions, almost half felt that computer and Internet services would play a more important role in the future of their businesses.



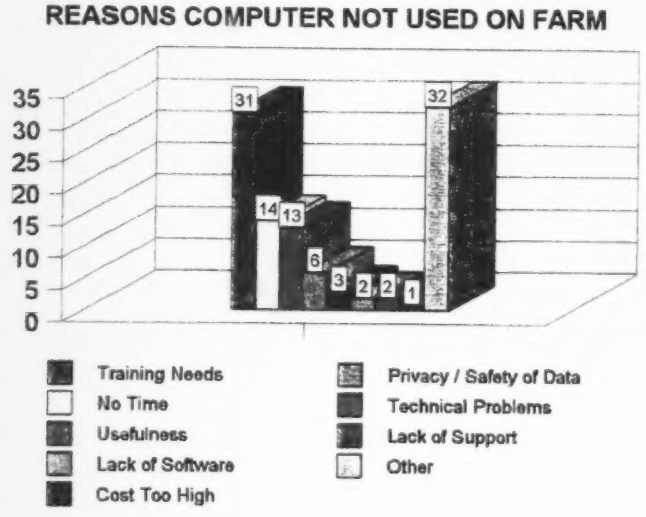


Survey Question 3.4 - Do you have any comments that you would like to add?
Of the 37 respondents who had comments to add, 12 are either retiring or felt that they their age was a factor for not having a computer. Eleven on those surveyed felt that their farm operation was too small (or was shutting down in the near future) so a computer was not needed. A complete list of comments can be found in Appendix 2.

Surveys of Farms With Computers But Not Used for Farm Use

The following is the summary of information for the 72 respondents who indicated that they have a computer, but do not use it for farm use:

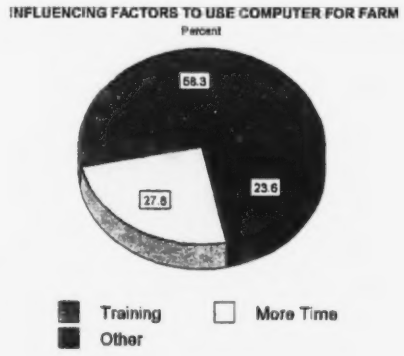
Survey Question 4.1 - Why is the computer not used for the farm operation?
Of the 72 respondents to this portion of the survey, almost half (31) felt they needed more training in order to use their computer for their operation. Lack of time to learn to use the technology was chosen by 14 of the respondents. More than a dozen of the 72 people felt that there was no need to use the computer for their farm citing reasons like "no point - small farm" as well as it is "not practical". The Other category primarily included such reasons 'not needed', 'farm is too small', or 'not interested'. A complete list of the other reasons can be found in Appendix 2.



Survey Question 4.2 - Are you considering using your computer for your farm operation in the next year?
Over 60% (45 of 72 respondents) of those surveyed were not planning to use their computer for their operation in the next year.

Survey Question 4.3 - What factors would influence your decisions to use your computer for business use?

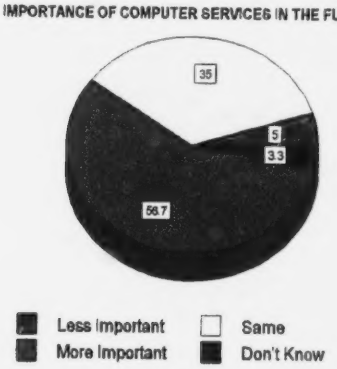
Of those surveyed, over half (58.3%) of the 72 respondents felt that more training would play a large part in using their computer for their operation. Twenty-seven point eight of the respondents said that more time to learn and use the computer would influence their decision to use the computer for farm use. Other factors that would influence farmers to use their computer for their farm operation would be if they were a larger operation. A complete list of other factors can be found in Appendix 2.

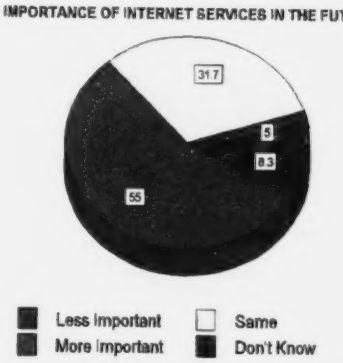


Survey Question 4.4 - Would computer training help?

Over 63% (46 of 72 respondents) felt that if they had training it would help them to use their computer for their farm operation. Exactly 25% (18 of 72 respondents) of those surveyed did not think training would influence their decision to use their computer for their farm. Approximately 11% were unsure.

Survey Question 4.5 - Compared to today, what level of importance do you see a computer playing in the future of your business? Compared to today, what level of importance do you see internet services playing in the future of your business?
Over half of the respondents that were asked these questions felt that both computer and internet services will play a more important part in the future of their business. Thirty-five percent felt that computers will play the same role in the future of their business, while just below that at 31.7% felt that internet services will stay the same in the future.



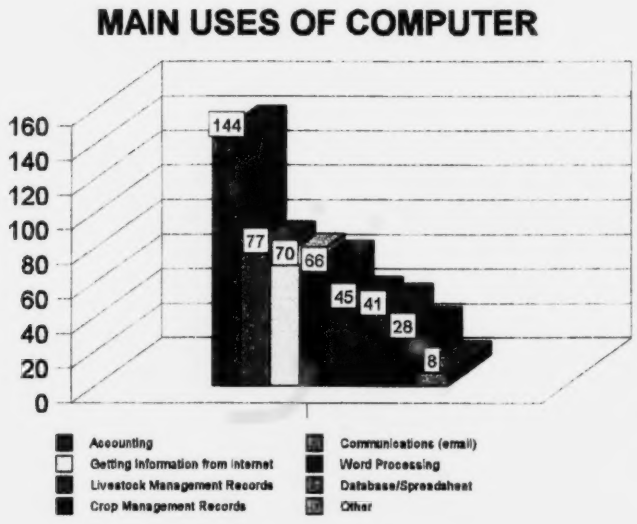


Survey Question 4.6 - Do you have any comments that you would like to add?
Of the 11 people who provided additional comments, over half felt in one way or another that they were not interested in computers because their operation was too small. A complete list of comments can be found in Appendix 2).

Surveys of Farms Using Computers

The following is the summary of information for the 175 respondents who indicated that they have a computer that they use for farm use:

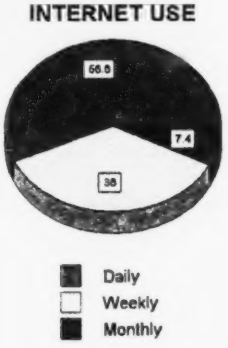
Survey Question 5.1 - What are the main uses of your computer?
Of the 175 respondents, 144 used their computer for accounting. Communications (email) as well as getting information from the Internet were chosen as other main uses of their computer with 77 and 70 respondents replying, respectively. Livestock management records (45) and word processing (66) were also chosen as main uses of their computer. Crop management records were used by 28 of the respondents with 8 respondents saying that their computer was used on their farm for other reasons including, to track weather reports and market conditions, to register their cattle, as well as for market reports and to buy on the stock market. A complete list of the other uses can be found in Appendix 2.



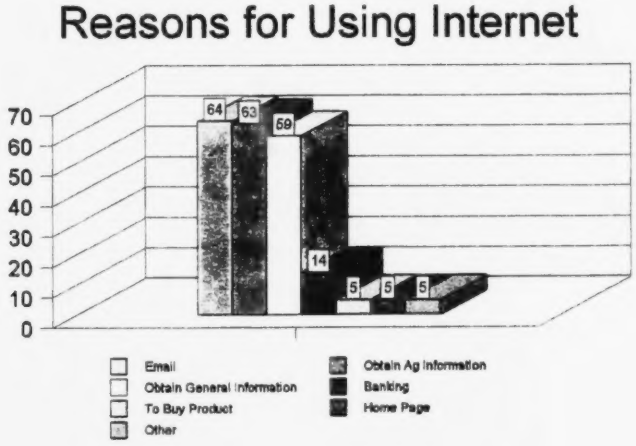
Survey Question 5.2 - What operating system do you primarily use on your PC?
The majority of respondents (89 1%) use Windows 95 or 98 on their computer.
Any other operating system than Windows 95 or 98 was chosen by 5 7% of the respondents, with 5 1% not knowing the operating system that they were using.

Survey Question 5.3 - Do you use the Internet?
Internet use was found to be common among farm operations with computers with 78.3% (137/175) of those surveyed stating that they did use the Internet. Only 21.7% (38/175) of the respondents do not use the Internet.

Survey Question 5.4 - How often do you use the Internet?
Among those136 respondents who use the Internet, 56.6% use it daily, 36.0% use it weekly, while 7.4% use it on a monthly basis.



Survey Question 5.5 - What is the main reason for using the Internet?
Of all the reasons for using the Internet, Email and to receive agricultural related information came out on top with 64 and 63 people choosing them, respectively. To look for general information was chosen by 59 people as a main reason for using the Internet. Also, for banking (14), to buy products (5), to maintain their own home page (5), and other (5) which included such reasons as comparison buying, to get weather information in the summer, to register cattle, and for leisure. A complete list of the other reasons can be found in Appendix 2.

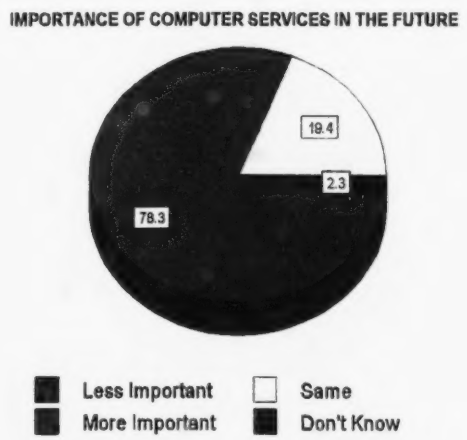


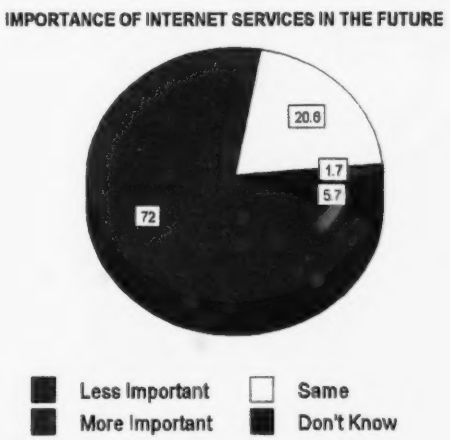
Survey Question 5.6 - Have you ever received any training in accessing the Internet?
Of the 175 people that use a computer for their farm operation, 138 (78.9%) have not received any training in accessing the Internet. Thirty-seven (21.1%) had received some sort of training in accessing the Internet.

Survey Question 5.7 - Would you be interested in receiving training on the Internet?
One hundred seventy-four people were asked if they would be interested in receiving training in the Internet with 96 (55.2%) said yes, they would be interested in receiving some training, while 78 (44.8%) said they would not be interested

Survey Question 5.8 - Do you think having a web page for your farm would be helpful?
Of the 170 respondents, 45.3% felt that having a web page for their farm would be helpful. Over half, 54.7% did not feel that a web page for their farm would be helpful.

Survey Question 5.9 - Compared to today, what level of importance do you see a computer playing in the future of your business? Compared to today, what level of importance do you see Internet services playing in the future of your business?
Of the 172 respondents in this portion of the survey, over 78% indicated that they felt that computers would play a more important role in their operation in the future, while 72% felt the same for internet services.





Survey Question 5.10 - Do you have any comments that you would like to add?
Of the comments that people provided, 15 said that they would be interested in anything from specific training such as web page design, Internet training, farm bookkeeping and accounting (what program to use), right down to "any training would be helpful". Some of the other comments were, "computers make things a lot easier", "the Internet takes too much time", and "how well do we know the system? more information on the government site about what the computer can do for farmers or how it can be used". A complete list of comments can be found in Appendix 2.

Appendix 1. Forms Used to Conduct the Survey

PEI Department of Agriculture & Forestry and PEI Agricultural Human Resource Council

Computer and Internet Use on PEI Farms Survey

Hello, the Department of Agriculture & Forestry and the Agricultural Human Resources Council are studying computer use on farms. Do you have a few minutes to talk about computers on your farm? (This information will help plan future activities and training.)

Identification Section

1.1 Respondent Identification Code

[ ]

Section A

2.1 Do you have a computer?

____ Yes (Go to next question) ____ No (Go to Section B)

2.2 Do you use the computer for farm use?

____ Yes (Go to Section D) ____ No (Go to Section C)

Section B

To Be Completed For Operations With No Computer.

3.1 Are you considering purchasing a computer for your farm business in the next year?

____ Yes
____ No
____ Don't Know

3.2 I will read a list of concerns that people without computers have - please answer whether you are also concerned:

____ Cost too high
____ Usefulness
____ Lack of support
____ Technical problems
____ More training needs
____ Privacy/safety of data
____ Lack of Software

3.3 Compared to today, what level of importance do you see a computer playing in the future of your business? Compared to today, what level of importance do you see internet services playing in the future of your business?

	Less Important	Same	More Important	Don't Know
Computer				
Internet Services				

3.4 Do you have any comments that you would like to add?
After this question go to Demographics Information

Section C

To Be Completed With Operations With A Computer That Is Not Used For Farm Use.

4.1 Why is the computer not used for the farm operation?
Check all that apply

____ Training needs
____ Privacy/safety of data
____ Cost too high
____ Lack of support
____ Other _____
____ No time
____ Lack of Software
____ Usefulness
____ Technical problems

4.2 Are you considering using your computer for your farm operation in the next year?
____ Yes ____ No

4.3 What factors would influence your decisions to use your computer for business use.
____ Training
____ More Time
____ Other _____

4.4 Would computer training help?
____ Yes
____ No
____ Don't Know

4.5 Compared to today, what level of importance do you see a computer playing in the future of your business? Compared to today, what level of importance do you see internet services playing in the future of your business?

	Less Important	Same	More Important	Don't Know
Computer				
Internet Services				

4.6 Do you have any comments that you would like to add?
After this question go to Demographics Information

Section D

To be completed for farms which use At Least One Computer.

5.1 What are the main uses of your computer? *Check all that apply*

____ Word Processing
____ Communications (email)
____ Accounting
____ Getting Information from the internet
____ Livestock Management Records
____ Database/spreadsheet
____ Crop Management Records
____ Other _____

5.2 What operating system do you primarily use on your PC?

____ Windows 95 or 98
____ Don't Know
____ Other

5.3 Do you use the internet?

____ Yes (Goto next question) ____ No (Goto Question 5.6)

5.4 How often do you use the internet?

Daily	Weekly	Monthly

5.5 What is the main reason for using the internet? *Check one only*

____ Email
____ To by products
____ Banking
____ Other _____
____ General information
____ Home page
____ Agricultural related information_____

5.6 Have you ever received any training in accessing the internet?

____ Yes ____ No

5.7 Would you be interested in receiving training on the internet?

____ Yes ____ No

5.8 Do you think having a web page for your farm would be helpful?

____ Yes ____ No

5.9 Compared to today, what level of importance do you see a computer playing in the future of your business? Compared to today, what level of importance do you see internet services playing in the future of your business?

	Less Important	Same	More Important	Don't Know
Computer				
Internet Services				

5.10 Do you have any comments that you would like to add? *After this question go to Demographics Information*

Demographic Information

6.1 Would you classify your farm as mainly?

Check one only

____ Potato
____ Beef
____ Dairy
____ Hog
____ Berry
____ Mixed
____ Other root crops or vegetables
____ Cereal
____ Other _____

6.2 For your industry, would you classify your farm size as:

____ Above average size
____ Average size
____ Below average size

6.3 What age category would the principal operator fall into?

Daily	Weekly	Monthly

6.4 Farm Region

This will be coded by data collectors

____ West Prince
____ Summerside
____ Charlottetown
____ Montague
____ Souris

Thank You Very Much For Your Time!

Appendix 2. Additional Information Provided by Respondents

Survey Question 3.4 *(Completed by respondents who do not have a computer).*
Do you have any comments that you would like to add?

- not interested in computers at all;
- not interested in computers at all;
- they will be shutting down the farm soon and feel they have no use for a computer;
- too old to start using a computer;
- we are older people, and we just have a small farm;
- his farm is a family business and he doesn't think a computer should have any part of it - he is able to keep everything in his head and believes only large corporate farms are in need of computers;
- are concerned about getting the internet because of children
- people purchase computers without knowing how it will benefit them - he gets a better feel for things when he does them hands on;
- from old school, scared on internet;
- they have considered buying a computer for their farm - her other business (tourism) is on the internet;
- they would be interested in getting training in their own home;
- nobody is helping agriculture anymore - it is in very bad shape;
- he doesn't have much of a farm left and doesn't see any use for a computer;
- when the kids learn how to use it, we might need one;
- feels he is too old to start using computers;
- they are too small for a computer;
- with computers, they are always changing, and its too hard to keep up - by the time you get it home it is out of date - no good for small business;
- he is 66 and is not interested in computers at all;
- too old to start and learn - but they are the future;
- security concerns;
- don't farm too much anymore;
- don't really know too much about computers;
- soon to be retiring so computer may not be that important;
- have a small farm so computer may not be needed;
- only have 12 sheep - so don't really need it;
- too small of farm - no need for computer;
- takes too much time to use;
- computers are taking away too many jobs;
- they are looking for suitable software for their farm;

- planning to retire - not interested in computers;
- they use to have a computer but are not getting another;
- he is 66 and not interested in computers at all;
- retiring soon - no need;
- retiring so a computer is not needed;
- just never got around to getting a computer - keep putting it off but plan to get one;
- getting out of farming (no need for computer);
- haven't got around to getting a computer - have talked about it for the last 3-4 years;
- husband doesn't think one is needed (from old school).

Survey Question 4.1 *(Completed by respondents with a computer that is not used for farm use).*
Why is the computer not used for the farm operation? (Other)

- not needed - small
- not interested
- computer is obsolete
- against computers
- lack of interest
- not use to it yet
- almost through with farming
- small farm
- no patience
- it is too old
- not computer literate
- no point, small farm
- a bit of everything
- no need
- not into that
- poor eyesight
- books are done by others
- faster by hand
- just purchased
- old computer
- no programs set up yet - just got it
- other business the computer is used for there
- not interested
- farm is too small
- intimidates her
- don't need it
- lack of operators
- too complicated
- no need

- not feasible
- has an accountant
- not practical
- not needed for this part of farm

Survey Question 4.3 (*Completed by respondents with a computer that is not used for farm use).*
What factors would influence your decisions to use your computer for business use? (Other)

- bigger farm
- none
- new computer
- if we were bigger
- finding software
- a bit of everything
- not much thought about that
- poor eyesight
- if cost effective
- new computer purchase
- upgrading of system
- none
- none
- none
- none - too old
- an operator
- easier to keep books
- larger operation

Survey Question 4.6 *(Completed by respondents with a computer that is not used for farm use).*
Do you have any comments that you would like to add?

- he is from old school and refuses to use computers;
- he is just about through with farming and is not interested in getting into computers at this time;
- they are considering purchasing a new computer;
- enjoyed using computer; would be faster in the long run for books;
- input (time) = output (benefits)
- said wife starting books on - stopped because she said it was easier the old fashioned way;
- getting too old - not interested in computer;
- interested to know what type of farming programs are available
- not interested in learning computers;
- feels like he has no need for computer;

- hasn't put much thought in to using a computer for the farm;
- they would like to keep breeding records.

Survey Question 5.1 (*Completed by respondents who indicated they do have a computer that they use for farm use).*
What are the main uses of your computer? (Other)
- buying on stock market;
- inventory;
- track weather reports and market conditions;
- did use for accounting until 2000 - doesn't work now;
- games;
- don't know;
- financial;
- register cows (Holstein Canada)

Survey Question 5.5 (*Completed by respondents who indicated they do have a computer that they use for farm use).*
What is the main reason for using the internet? (Agricultural related information)
- breeding;
- meat products;
- register cattle;
- market reports;
- market updates;
- registering calves;
- market reports;
- parts, market reports;
- equipment;
- crop prices;
- auction;
- weather;
- markets & buffer zones;
- customer accounts.

Survey Question 5.5 (*Completed by respondents who indicated they do have a computer that they use for farm use).*
What is the main reason for using the internet? (Other)
- market
- research
- research

- marketing
- payroll tables
- taking MBA program
- comparison buying
- weather information in summer
- register cattle
- register cattle
- past time

Survey Question 5.10 (*Completed by respondents who indicated they do have a computer that they use for farm use).*

Do you have any comments that you would like to add?

- training to make a home page would be helpful - establish lists of links for agriculture;
- courses are needed for farmers who are unfamiliar with computers;
- computers make things a lot easier;
- they do not have the internet because of their kids - would like to know a way to prevent them from entering onto sites that are not suitable;
- would like to know what web page can do for them;
- thinks that the internet takes up too much time;
- they already have a web page;
- would like to know more about web pages;
- they have a very old computer and are considering purchasing a new one;
- took an evening course last year on the internet;
- any training would be helpful;
- would be nice to get more help for farm bookkeeping;
- he would like to know more about the restructuring at Agriculture & Forestry;
- has a web page for selling;
- every month internet service is getting slower (can't get high speed internet);
- wants free internet training;
- would attend training if it were free for farmers;
- don't use the computer much - didn't roll over in 2000 so don't use it much for the farm;
- would like to take a course;
- accounting - what program should we use?
- they have a web page for their farm;
- they have a web page;
- they think the internet is a time consuming process and people get side tracked easily - they would like to see a service where they can get their questions answered without wasting a lot of their time;
- computer won't help farmer - going broke with computer;
- just got computer at Christmas so just getting started;

- would like more training;
- what accounting software to buy? - no help;
- how well do we know the system?
- more information on the government site about what the computer can do for farmers or how it can be used;
- have two computers;
- internet okay for getting specific information;
- our kids use the computer mostly;
- tissue culture (PEI) putting up web page so am able to use that;
- would like to receive internet training if it was close to home;
- would be interested in web page design;
- maybe someone else on farm would be interested in receiving training on the internet;
- computers feed his cows so there will be more use in the future.

Survey Question 6.1 *(Completed by respondents from each of the three categories, those who do not have a computer, those who have a computer but do not use it for farm use, and those who have a computer and use it for their farm operation).*
Would you classify your farm as mainly? (Other)

- horses
- horses
- small hobby farm - grow hay
- horse breeding
- hay, grain, turnip
- sheep
- sheep
- herb
- poultry
- hens
- bees
- chickens
- cash crop
- aquaculture
- forestry contracting
- egg and poultry
- medicinal herb
- cash crops
- fruit
- pork
- grain cleaning
- ostridges (with horses also)